



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/489,514	01/21/2000	S. R. Narayanan	06618-406001	5937

20985 7590 08/11/2005

FISH & RICHARDSON, PC
12390 EL CAMINO REAL
SAN DIEGO, CA 92130-2081

EXAMINER

MERCADO, JULIAN A

ART UNIT	PAPER NUMBER
----------	--------------

1745

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/489,514

Applicant(s)

NARAYANAN

Examiner

Julian Mercado

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114 was filed in this application after a decision by the Board of Patent Appeals and Interferences, but before the filing of a Notice of Appeal to the Court of Appeals for the Federal Circuit or the commencement of a civil action. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on April 15, 2005 has been entered.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 7-11, 13, 14, 18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Serpico et al. in view of Dupont Zonyl reference.

The rejection is maintained for the reasons already of record. The examiner notes the present amendment to claim 1 which a catalytic material including "platinum and another material". Serpico et al. teaches platinum and another material in the form of platinum and carbon, e.g. platinum-supported carbon. (Example I) The present amendment further recites that the platinum catalytic material is "randomly spaced and uniformly mixed". Serpico et al. in Example I further teaches that "[t]he mixture was stirred with moderate agitation to form a

Art Unit: 1745

viscous particle dispersion”, and upon addition of the fluoropolymer (PTFE), “[t]he dual particle suspension was stirred slowly until homogenous.”

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Serpico et al. in view of Dupont Zonyl reference as applied to claims 7-11, 13, 14, 18, and 20 above, and further in view of Kindler.

The rejection is maintained for the reasons of record. The present amendment is believed *prima facie* obvious over the combined teachings of Serpico et al. and the Dupont Zonyl reference, set forth above. The rejection further in view of Kindler is maintained for the detailed reasons already of record.

Claims 15-17, 19, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Serpico et al. in view of Dupont Zonyl reference as applied to claims 7-11, 13, 14, 18, and 20 above, and further in view of Samuels et al.

The rejection is maintained for the reasons of record. The present amendment is believed *prima facie* obvious over the combined teachings of Serpico et al. and the Dupont Zonyl reference, set forth above. The rejection further in view of Samuels et al. is maintained for the detailed reasons already of record.

Applicant's arguments for patentability for the instant roughening step have been fully considered, however they are not found persuasive.

Art Unit: 1745

The teachings of Samuels et al. are maintained to show that roughening of the membrane surface prior to catalyst deposition would be an obvious modification at least to the skilled artisan. This feature is considered shown by Samuels et al. in col. 7 line 33 as follows:

...before the catalyst is deposited upon the surface of the solid polymer electrolyte, the surface is treated by a suitable abrading or roughening means which contacts the surface of the solid polymer electrolyte base member in at least two directions. In a preferred mode, the solid polymer electrolyte membrane is abraded with a silicon carbide sheet to provide the desired roughness. The catalyst is deposited upon the roughened or abraded surface and fixed thereto by suitable means, e.g., pressure and/or heat. By this method, substantially reduced loadings of catalysts are possible.

Thus, it is maintained that the skilled artisan would find obvious to employ roughening of the membrane in Serpico et al.'s invention for reasons such as increasing the surface area thereof, thereby enhancing sites for catalyst deposition.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian Mercado whose telephone number is (571) 272-1289. The examiner can normally be reached on Monday through Friday.

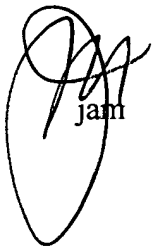
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Art Unit: 1745

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



JAM



PATRICK JOSEPH RYAN
SUPERVISORY PATENT EXAMINER